

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1-12. (Cancelled)

13. (previously presented) A process for the desulfurization of an engine fuel onboard a motor vehicle, comprising:

contacting an engine fuel comprising sulfur-containing components with a selective liquid-phase adsorption material comprising an oxide of Al, Mg, Si, or Ti that is doped with Ag; and

separating the sulfur-containing components from the engine fuel, thereby obtaining a low-sulfur fuel; and for use by the motor vehicle

using the low-sulfur fuel for a spark-ignition engine or a diesel engine.

14. (previously presented) A process according to Claim 13, wherein the adsorption material has an internal surface area of from 10 to 1600 m²/g.

15. (previously presented) A process according to Claim 13, wherein the adsorption material comprises at least one of Al₂O₃, MgO, SiO₂, or TiO₂.

16. (previously presented) A process according to Claim 13, wherein the adsorption material comprises zeolites, hydrotalcites, or mixed oxides doped with Ag.

17. (previously presented) A process for the desulfurization of an engine fuel onboard a motor vehicle, comprising:

contacting an engine fuel comprising sulfur-containing components with a selective liquid-phase adsorption material, wherein the adsorption material is a biogenic material; and

separating the sulfur-containing components from the engine fuel, thereby obtaining a low-sulfur fuel.

18. (previously presented) A process according to Claim 17, wherein the biogenic material is an enzyme.

19. (previously presented) A process according to Claim 13, wherein the engine fuel is selected from the group consisting of petrol, diesel fuel, kerosine, and methanol.

20. (previously presented) A process according to Claim 13, further comprising collecting the low-sulphur fuel in a tank.

21. (previously presented) A process according to Claim 13, further comprising immediately using the low-sulfur fuel.

22. (previously presented) A process according to Claim 13, wherein the adsorption material is arranged in series with a fuel pump.

23. (currently amended) A process ~~according to Claim 13~~ for the desulfurization of an engine fuel onboard a motor vehicle, comprising:

contacting an engine fuel comprising sulfur-containing components with a selective liquid-phase adsorption material comprising an oxide of Al, Mg, Si, or Ti that is doped with Ag; and

separating the sulfur-containing components from the engine fuel, thereby obtaining a low-sulfur fuel for use by the motor vehicle, wherein the adsorption material is arranged in a bypass circuit of a fuel pump.

24. (currently amended) A process ~~according to Claim 13~~ for the desulfurization of an engine fuel onboard a motor vehicle, comprising:

contacting an engine fuel comprising sulfur-containing components with a selective liquid-phase adsorption material comprising an oxide of Al, Mg, Si, or Ti that is doped with Ag; and

separating the sulfur-containing components from the engine fuel, thereby obtaining a low-sulfur fuel for use by the motor vehicle, wherein the adsorption material is integrated in a single structural unit with a fuel filter.

25. (previously presented) A process according to Claim 13, further comprising regenerating a sulfur-containing adsorption material onboard the motor vehicle.

26. (previously presented) A process according to Claim 13, further comprising replacing a sulfur-containing adsorption material.

27. (currently amended) A process ~~according to Claim 25~~ for the desulfurization of an engine fuel onboard a motor vehicle, comprising:

contacting an engine fuel comprising sulfur-containing components with a selective liquid-phase adsorption material comprising an oxide of Al, Mg, Si, or Ti that is doped with Ag;

separating the sulfur-containing components from the engine fuel, thereby obtaining a low-sulfur fuel for use by the motor vehicle; and

regenerating a sulfur-containing adsorption material onboard the motor vehicle, wherein the regenerating comprises heating the sulfur-containing adsorption material with the engine oil or the engine coolant of the motor vehicle.

28. (previously presented) A process for removing nitrogen oxides from a lean exhaust gas, comprising:

contacting the low-sulfur fuel according to Claim 13 with a catalytic converter; and

removing nitrogen oxides from the lean exhaust gas by using the low-sulfur fuel as a reducing agent.

29. (currently) A process for desulfurizing a catalytic converter in an exhaust-gas after-treatment engine system, comprising

contacting an engine fuel comprising sulfur-containing components with a selective liquid-phase adsorption material comprising an oxide of Al, Mg, Si, or Ti that is doped with Ag;

separating the sulfur-containing components from the engine fuel, thereby obtaining a low-sulfur fuel for use by the motor vehicle; and

~~regenerating the catalytic converter with low-sulfur fuel obtained according to Claim 13, thereby~~ desorbing accumulated sulfur from the catalytic converter using the low-sulfur fuel.

30. (currently amended) A process for desulfurizing a fuel and using desulfurized fuel for a motor vehicle, the process comprising:

using an adsorption unit to reduce the sulfur content of a fuel, wherein the adsorption unit is placed onboard the motor vehicle; and

regenerating the adsorption unit using heat from ~~at least one of~~ engine coolant ~~and or~~ engine oil.

31. (currently amended) A process according to Claim 30, wherein the adsorption unit has an adsorption material that has an internal surface area of from 10 to 1600 m²/g ~~m²/g~~.

32. (previously presented) A process for desulfurizing a fuel and using desulfurized fuel for a motor vehicle, the process comprising:

using an adsorption unit to reduce the sulfur content of a fuel, wherein the motor vehicle has a main fuel line and a bypass fuel line in parallel with the main fuel line, and wherein the adsorption unit is placed in the bypass fuel line; and

using the fuel of reduced sulfur content as engine fuel only when the engine is in a lean-burn mode.

33. (currently amended) A process according to Claim 32, wherein the adsorption unit has an adsorption material that has an internal surface area of from 10 to 1600 m²/g ~~m²/g~~.

34. (currently amended) A process according to Claim 32, further comprising regenerating the adsorption unit using heat from ~~at least one of~~ engine coolant ~~and~~ or engine oil.

35. (previously presented) A process for desulfurizing a fuel and using desulfurized fuel for a motor vehicle, the process comprising:

using an adsorption unit to reduce the sulfur content of a fuel, wherein the adsorption unit is placed onboard the motor vehicle; and

using the fuel of reduced sulfur content as a reducing agent for deNOxing a catalytic converter of the motor vehicle.

36. (currently amended) A process according to Claim 35, wherein the adsorption unit has an adsorption material that has an internal surface area of from 10 to 1600 m²/g ~~m²/g~~.

37. (currently amended) A process according to Claim 35, further comprising regenerating the adsorption unit using heat from ~~at least one of~~ engine coolant ~~and~~ or engine oil.

38. (previously presented) A process according to Claim 37, further comprising using the fuel of reduced sulfur content as engine fuel only when the

engine is in a lean-burn mode, wherein the motor vehicle has a main fuel line and a bypass fuel line in parallel with the main fuel line, and wherein the adsorption unit is placed in the bypass fuel line.

39. (previously presented) A process for desulfurizing a fuel and using desulfurized fuel for a motor vehicle, the process comprising:

using an adsorption unit to reduce the sulfur content of a fuel, wherein the adsorption unit is placed onboard the motor vehicle; and

using the fuel of reduced sulfur content to desulfurize a catalytic converter in an exhaust gas after-treatment system.

40. (currently amended) A process according to Claim 39, wherein the adsorption unit has an adsorption material that has an internal surface area of from 10 to 1600 m²/g ~~m²/g~~.

41. (currently amended) A process according to Claim 39, further comprising regenerating the adsorption unit using heat from ~~at least one of~~ engine coolant ~~and or~~ or engine oil.

42. (previously presented) A process according to Claim 41, further comprising using the fuel of reduced sulfur content as engine fuel only when the engine is in a lean-burn mode, wherein the motor vehicle has a main fuel line and a bypass fuel line in parallel with the main fuel line, and wherein the adsorption unit is placed in the bypass fuel line.

43. (previously presented) A process according to Claim 42, further comprising using the fuel of reduced sulfur content as a reducing agent for deNO_xing a catalytic converter of the motor vehicle.

44. (previously presented) A process for the desulfurization of an engine fuel onboard a motor vehicle, comprising:

contacting an engine fuel comprising sulfur-containing components with a selective liquid-phase adsorption material, wherein the adsorption material comprises a microorganism; and

separating the sulfur-containing components from the engine fuel, thereby obtaining a low-sulfur fuel.

45. (previously presented) A process according to Claim 44, wherein the microorganism is a bacterium.